



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,596	11/21/2003	Ayac Endo	117625	8683
25944	7590	08/06/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER GARRETT, DAWN L	
			ART UNIT 1774	PAPER NUMBER
			MAIL DATE 08/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/717,596

Applicant(s)

ENDO ET AL.

Examiner

Dawn Garrett

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,27-29 and 38-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,27-29 and 38-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 10, 2007 has been entered.
2. The amendment filed July 10, 2007 has been entered. Claims 19, 27, 29, 39 and 40 were amended. Claims 1-18, 20-26, and 30-37 are canceled. Claims 19, 27-29, and 38-40 are pending.
3. The objections to claims 19, 27, 29, 39 and 40 set forth in the last Office action (mailed May 9, 2007) are withdrawn due to the amendment.
4. The rejection of claims 19, 39 and 40 under 35 U.S.C. 102(b) as being anticipated by Watanuki et al. (JP 07-135079 A) is withdrawn.

Claim Rejections - 35 USC § 112

5. " The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 19, 39 and 40 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 1774

Applicant indicates claim 19 is supported by paragraph 132. The paragraph preceding paragraph 132 describes the embodiment wherein the metal deactivator is dispersed with either hole injecting material or luminescent material in the same layer. Claim 19 is drawn to a different embodiment of the invention wherein a first layer comprises the deactivator and a second layer comprises hole injecting material or luminescent material. Claim 19 recites an amount of deactivator in terms of materials present in a different layer. It is not seen where support for this specific amount of deactivator in terms of the hole injecting material or luminescent material disposed in a layer different from the layer which comprises the deactivator can be found.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 19, 39 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear exactly how much deactivator is present in the first layer, since the amount is in terms of a material present in the second layer. The composition of the first layer is not understood. Is the first layer solely comprised of deactivator or does the layer comprise deactivator in the range claimed with another material that is not a hole injecting material or a luminescent material? Clarification and/or correction are required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1774

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 27-29, and 38 are again rejected under 35 U.S.C. 102(b) as being anticipated by Watanuki et al. (JP 07-135079 A) (reference cited by applicant). Watanuki et al. discloses an EL device having at least one of an emission layer and a dielectric layer with metal deactivating agent (see abstract). This disclosure includes the embodiment wherein the luminescent layer does not have a deactivating agent and the dielectric layer (“second material layer”, “at least one material layer” or “antioxidant layer”) does have a deactivating agent as required by the instant claims. With regard to the solubility parameter properties recited in the claims, Watanuki et al. discloses the same types of deactivators that applicant describes in the instant specification. For example, Watanuki discloses triazoles and benzotriazoles as suitable (see par. 6 and 10). The metal deactivator is contained in binder resin (“organic material”) in an amount of 0.1 to 10% by weight (see par. 9). With regard to claims 27-29, the luminescent material layer is not required to have metal deactivator (see abstract). The dielectric layer reads upon the “at least one material layer containing a metal deactivator” of claim 27. The binder resin reads upon the “organic functional material in the antioxidant layer” as set forth in independent claim 29. No specific antioxidant materials other than deactivator are required by the antioxidant layer and accordingly, the dielectric layer disclosed by Watanuki is deemed to anticipate the “antioxidant layer” of claim 29.

Claim Rejections - 35 USC § 103

11. “ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1774

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 19, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanuki et al. (JP 07-135079 A) (reference cited by applicant). Watanuki et al. discloses an EL device having at least one of an emission layer and a dielectric layer with metal deactivating agent (see abstract). This disclosure includes the embodiment wherein the luminescent layer does not have a deactivating agent and the dielectric layer (“second material layer”, “at least one material layer” or “antioxidant layer”) does have a deactivating agent as required by the instant claims. With regard to the solubility parameter properties recited in the claims, Watanuki et al. discloses the same types of deactivators that applicant describes in the instant specification. For example, Watanuki discloses triazoles and benzotriazoles as suitable (see par. 6 and 10). The metal deactivator is contained in binder resin (“organic material”) in an amount of 0.1 to 10% by weight (see par. 9); however, the amount of material in either the hole injecting electrode or the luminescent layer is not specifically described (per the requirement that the deactivator is in a range of 0.1 to 10 percent by weight relative to the materials in either of these layers; however, please note the remaining 35 USC 112, first paragraph rejection set forth in this Office action). It would have been obvious to one of ordinary skill in the art to form the dielectric layer having 0.1-10% by weight of deactivator in terms of the luminescent or hole injection material present in the device, because the range of deactivator is generally taught since the amount of binder resin would be expected to be similar to the amount of luminescent material or hole injecting material present in the layers of the device. Furthermore, it would have been obvious to have determined a suitable amount of deactivator with minimal experimentation. The experimental modification of this prior art in order to ascertain optimum operating conditions (i.e., amount of

Art Unit: 1774

deactivator in terms of the amount of luminescent material or hole injection material present in the Watanuki et al. device) fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233.

With regard to claims 19, 39, and 40, the luminescent material layer is not required to have metal deactivator (see abstract). With regard to claim 40, the ITO electrode in the EL device inherently provides a hole injecting function (see par. 10, "transparent electrode") (as evidenced by the description of a hole injecting electrode of a conventional EL device such as the device described by Hamada et al. (US 5,529,853; see abstract of Hamada et al.)).

Response to Arguments

13. " Applicant's arguments filed July 10, 2007 have been fully considered but they are not persuasive.

Applicant's arguments with respect to the prior 35 USC 112, first paragraph, rejection have been addressed in the 35 USC 112 section of this Office action.

In response to applicant's concerns that Watanuki et al. does not teach metal deactivator in terms of material in a layer other than the one comprising the metal deactivator, an obviousness rejection has been set forth above for claims 19, 39 and 40. The rejections over claims 27-29 and 38 are respectfully maintained.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached on Monday through Friday.

Art Unit: 1774

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dawn Garrett
Primary Examiner
Art Unit 1774